

Fig-1

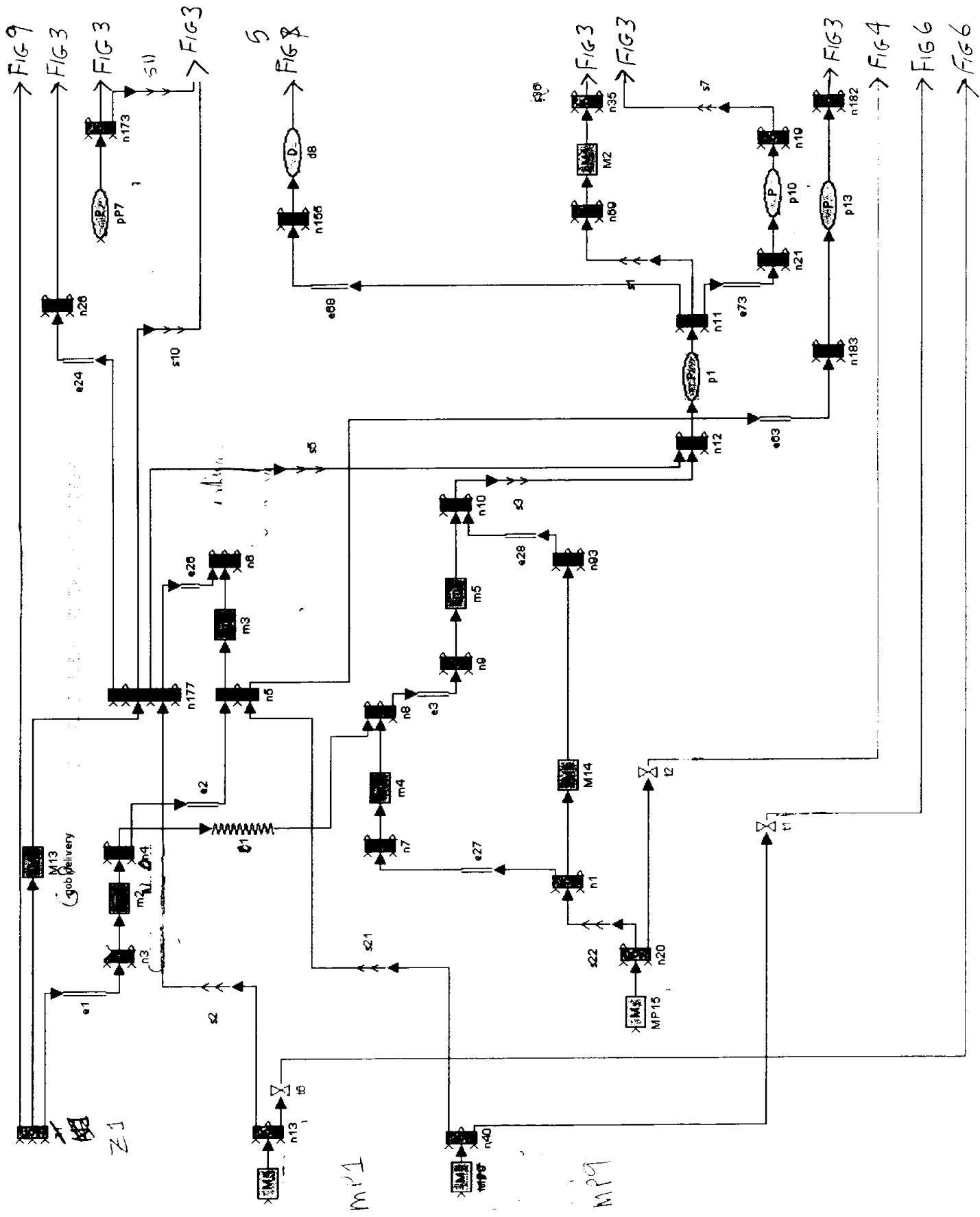


FIG 2

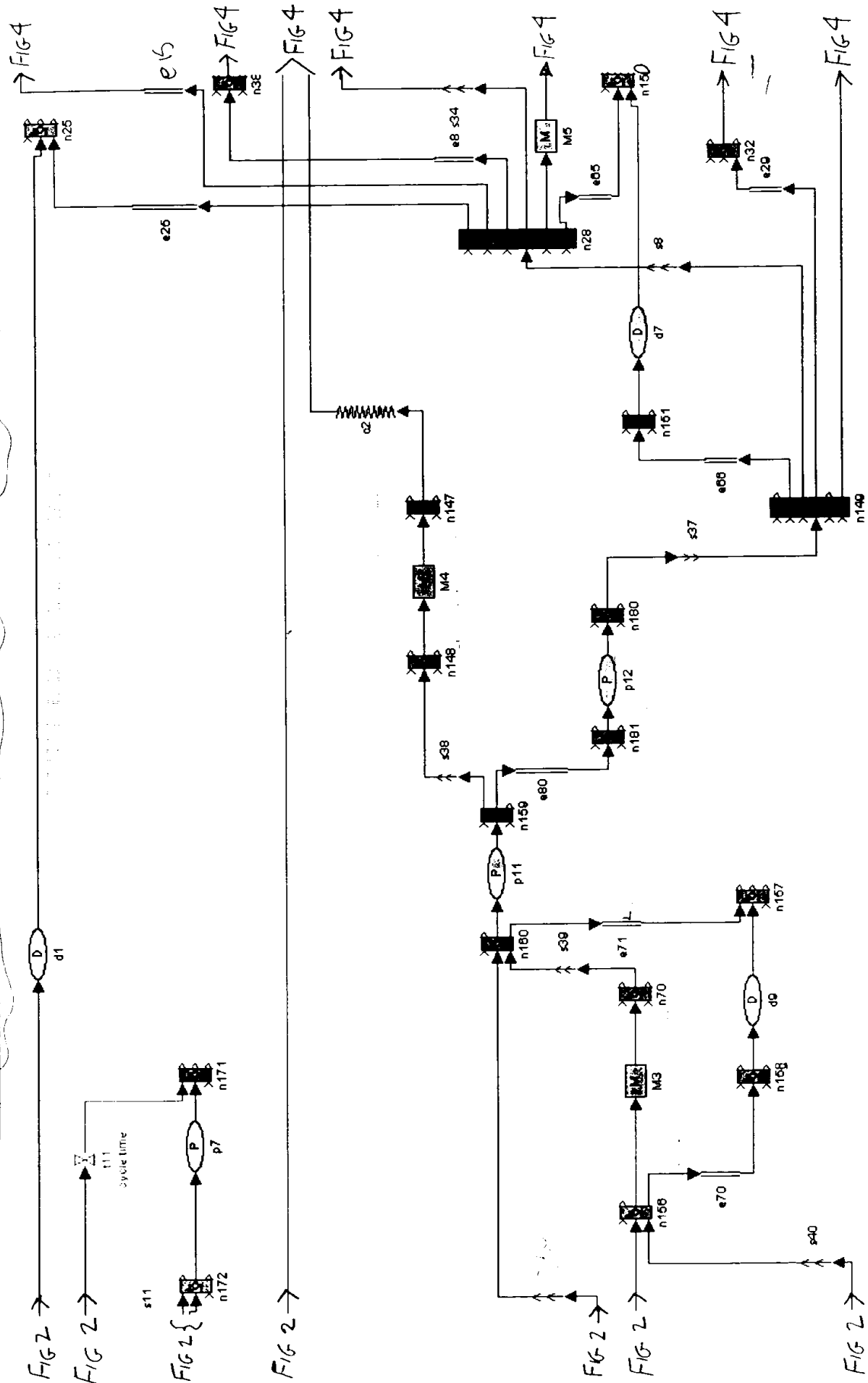


FIG 3

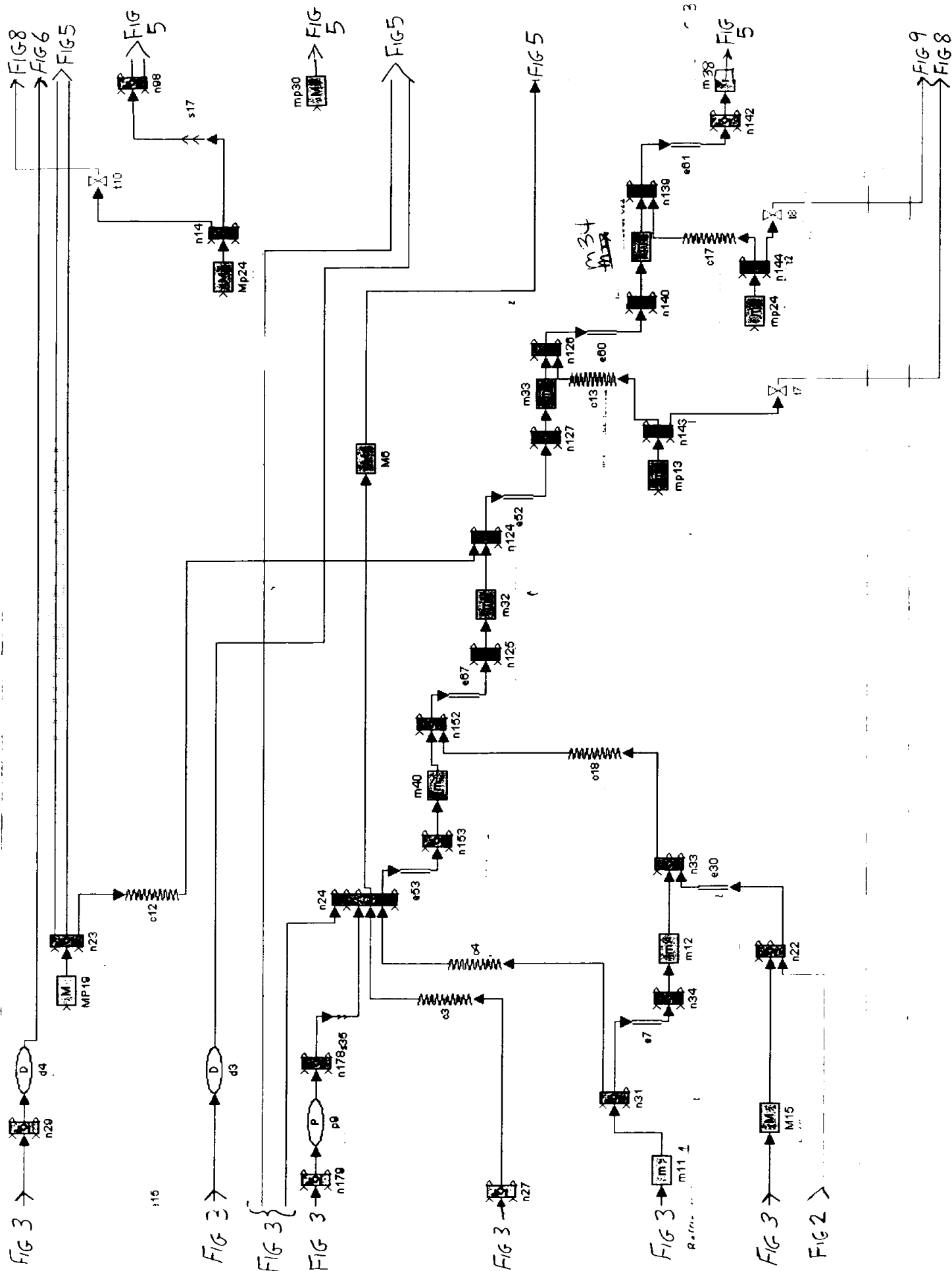
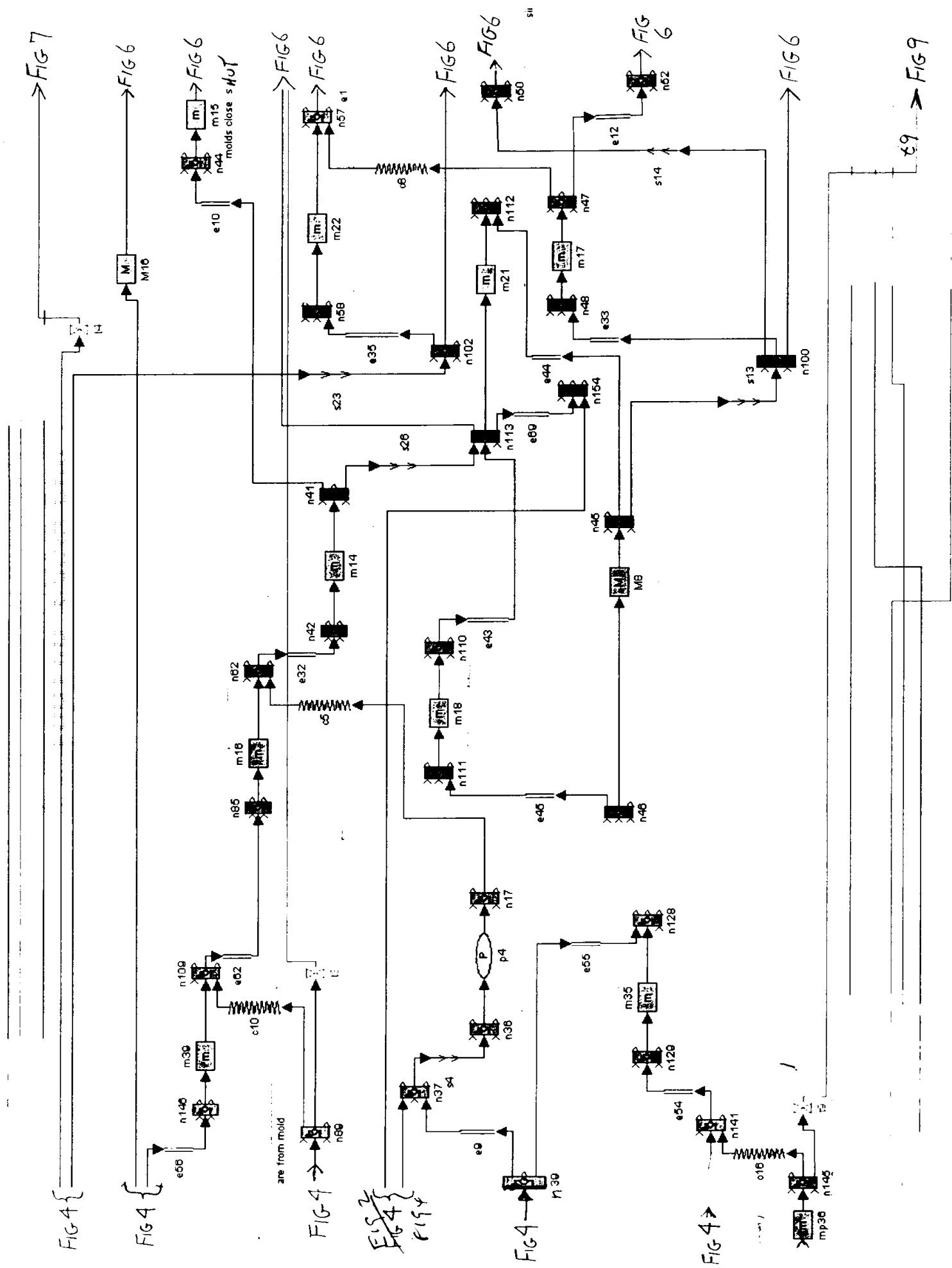


FIG 4



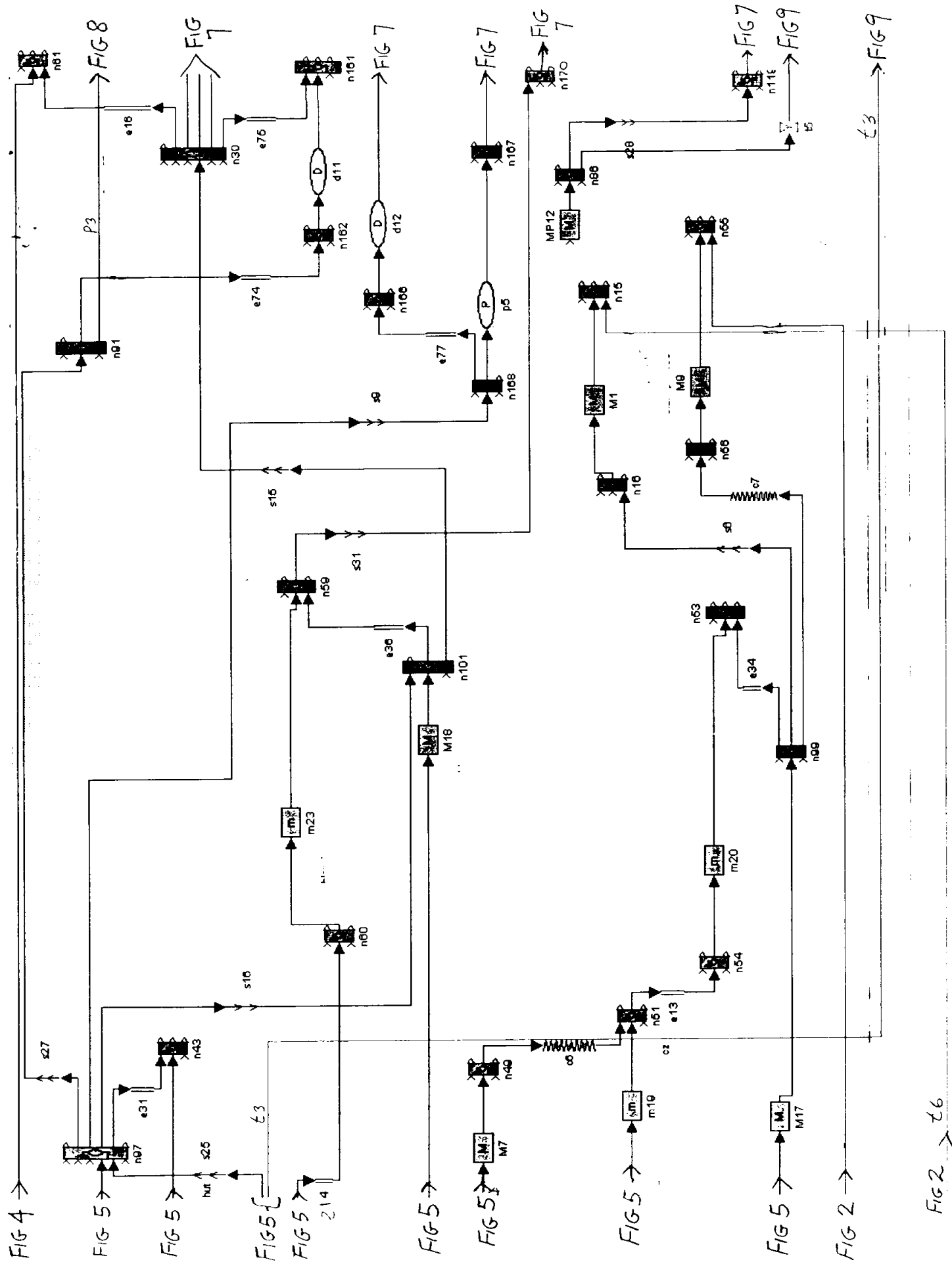
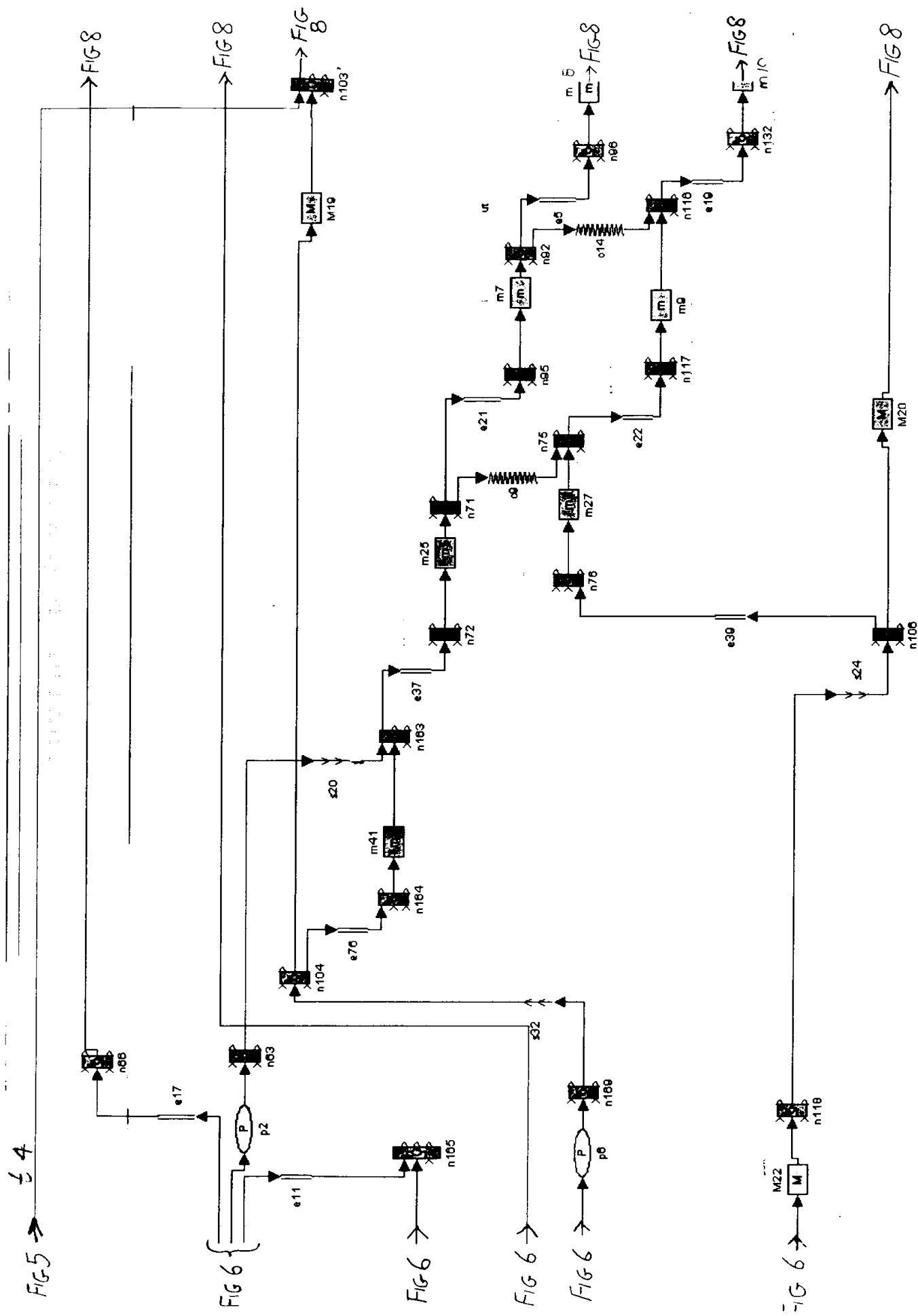


Fig 2 → 26

FIG 6



79

FIG 4 →  $\tau_{10}$

FIG 7 →

FIG 6 →

FIG 7 →

FIG 7 →

FIG 7 →

FIG 7 →

FIG 7 →

FIG 4 →  $\tau_7$

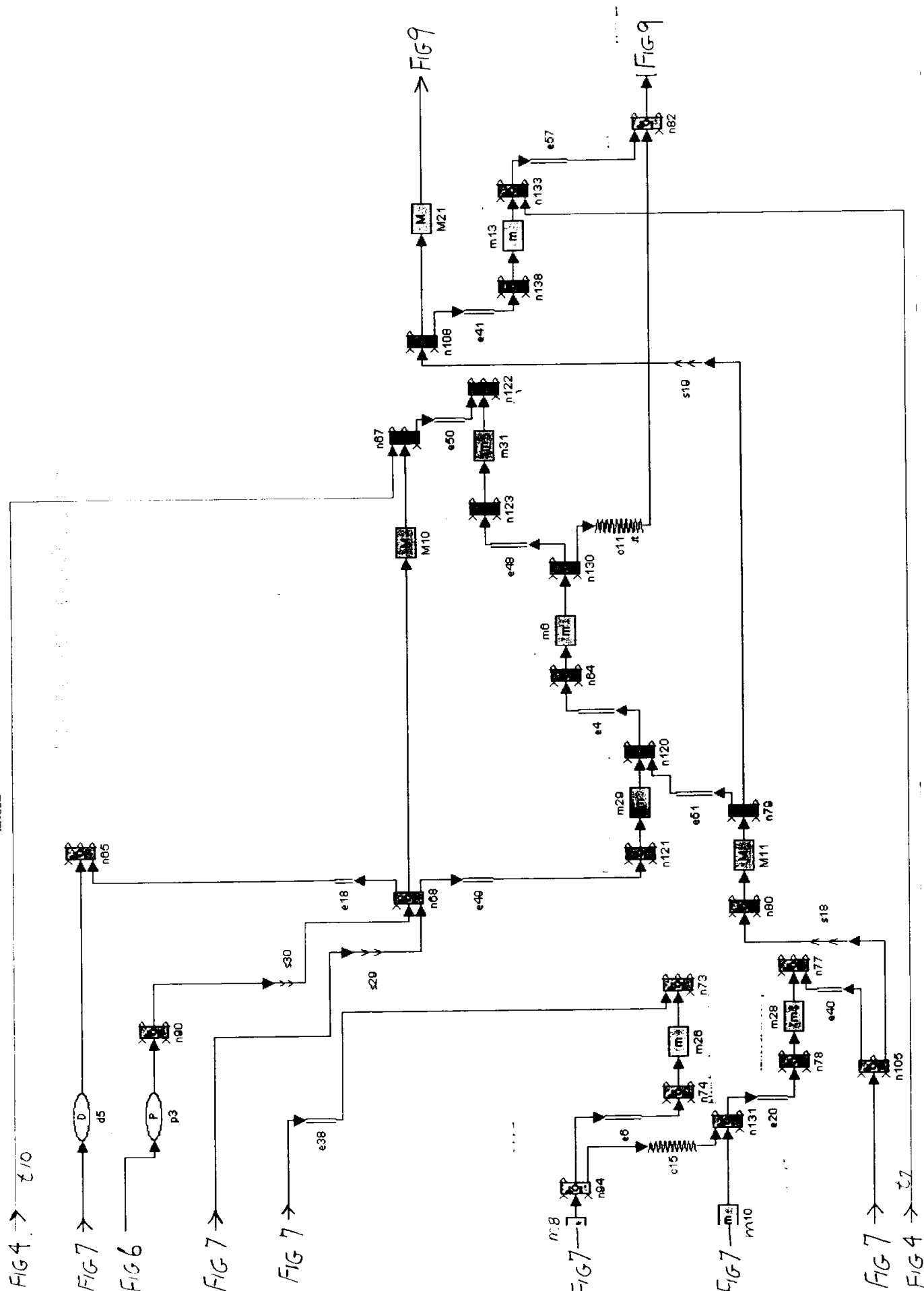


FIG 8



FIG 2 →

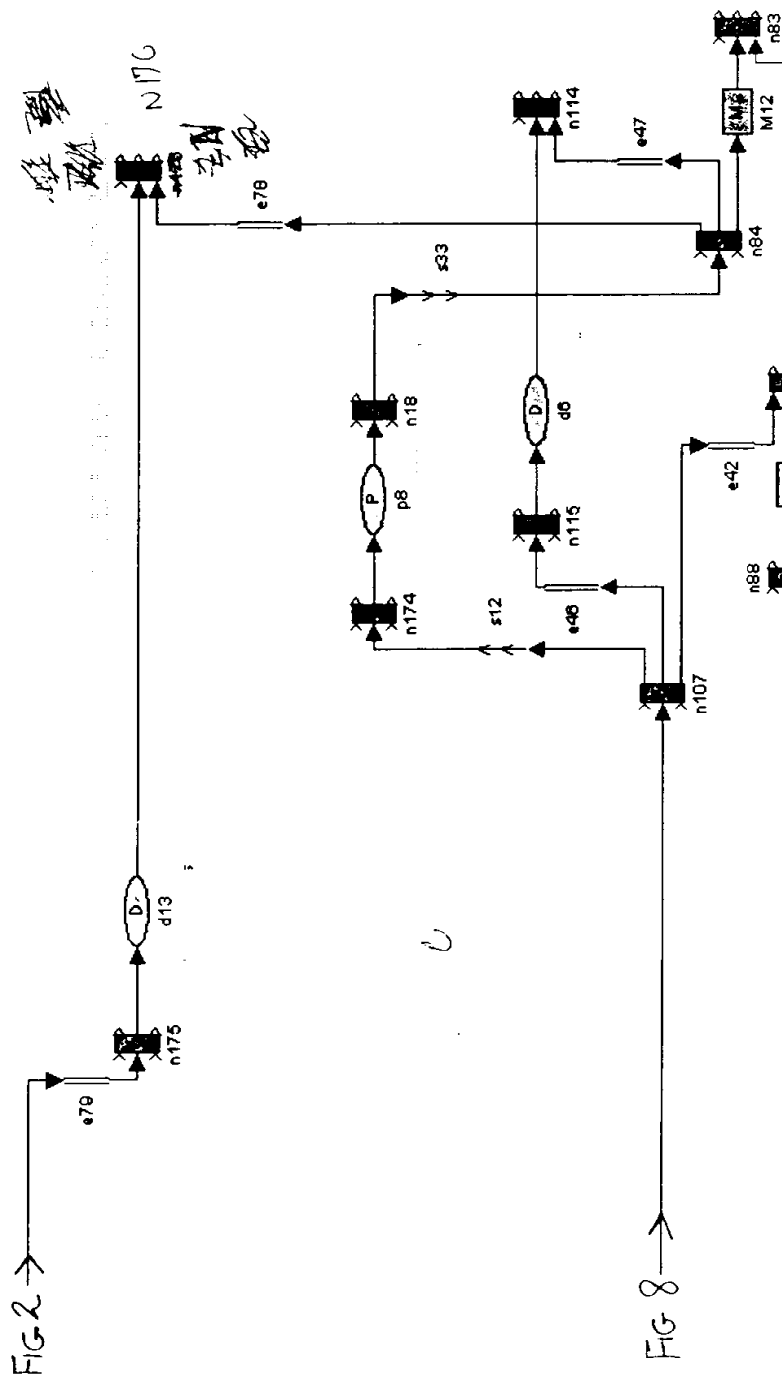


FIG 8 →

FIG 8 →

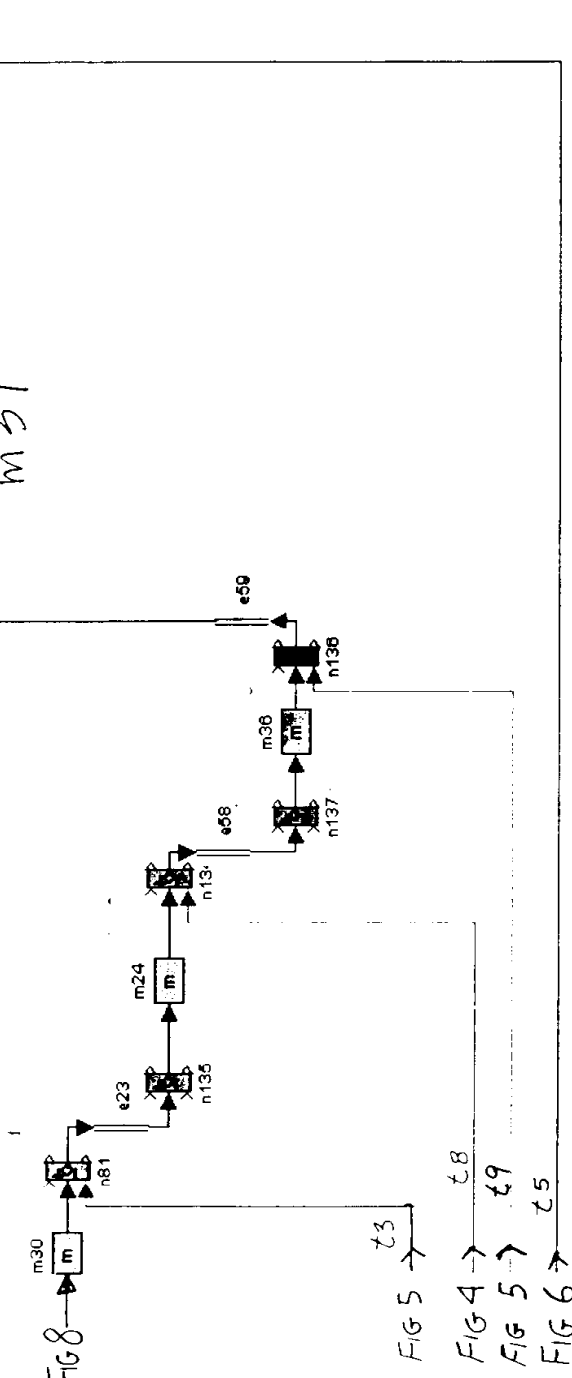


FIG 5 →

FIG 4 →

FIG 5 →

FIG 6 →

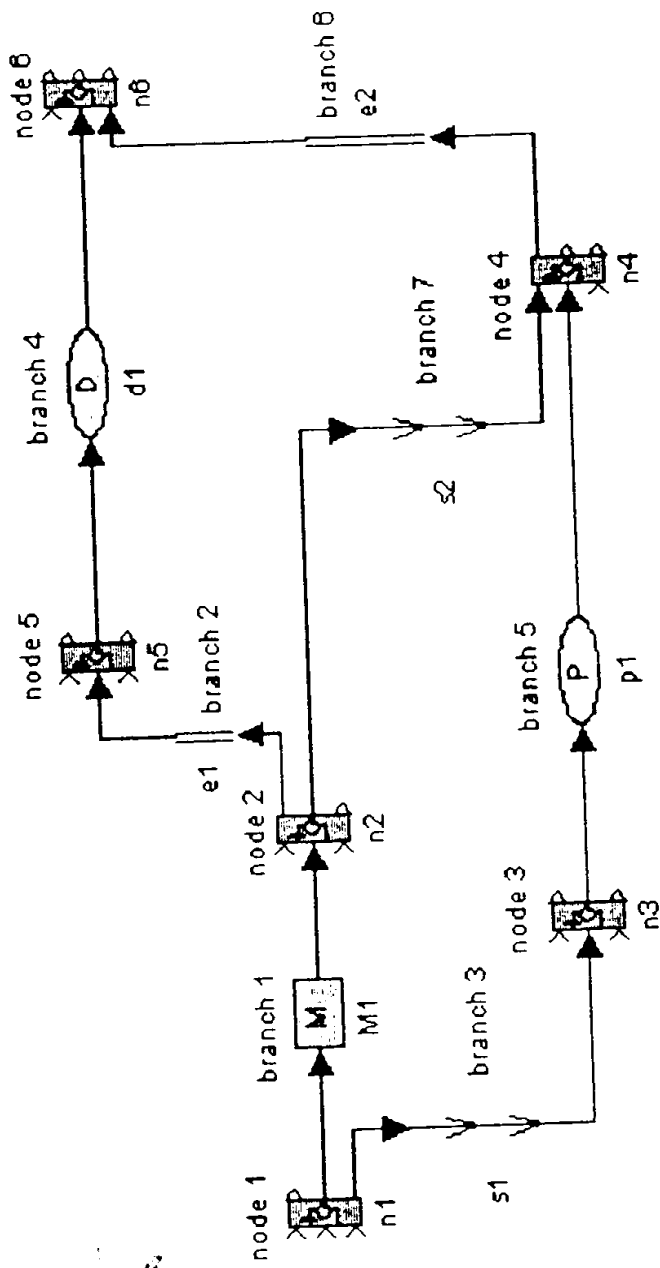


Fig- 10

G H

	Events	ON	OFF
1			
2	Gob Interceptor	334	14
3	Blanks Close	324	130
4	Blanks Open	130	321
5	Plunger Up	33	123
6	First Baffle	9	125
7	Plunger Down	127	327
8	Funnel	1	150
9	Settle Blow	1	1
10	Plunger Cooling	150	260
11	Invert	200	260
12	Neckring Open	274.5	283
13	Revert	282	172
14	Molds Close/Open	229	170
15	Mold Cooling	10	150
16	Blowhead	290	113
17	Final Blow	348	120
18	Take Out IN	137	197
19	Tongs Close	178	78
20	Take Out OUT	197	90

Fig - 11

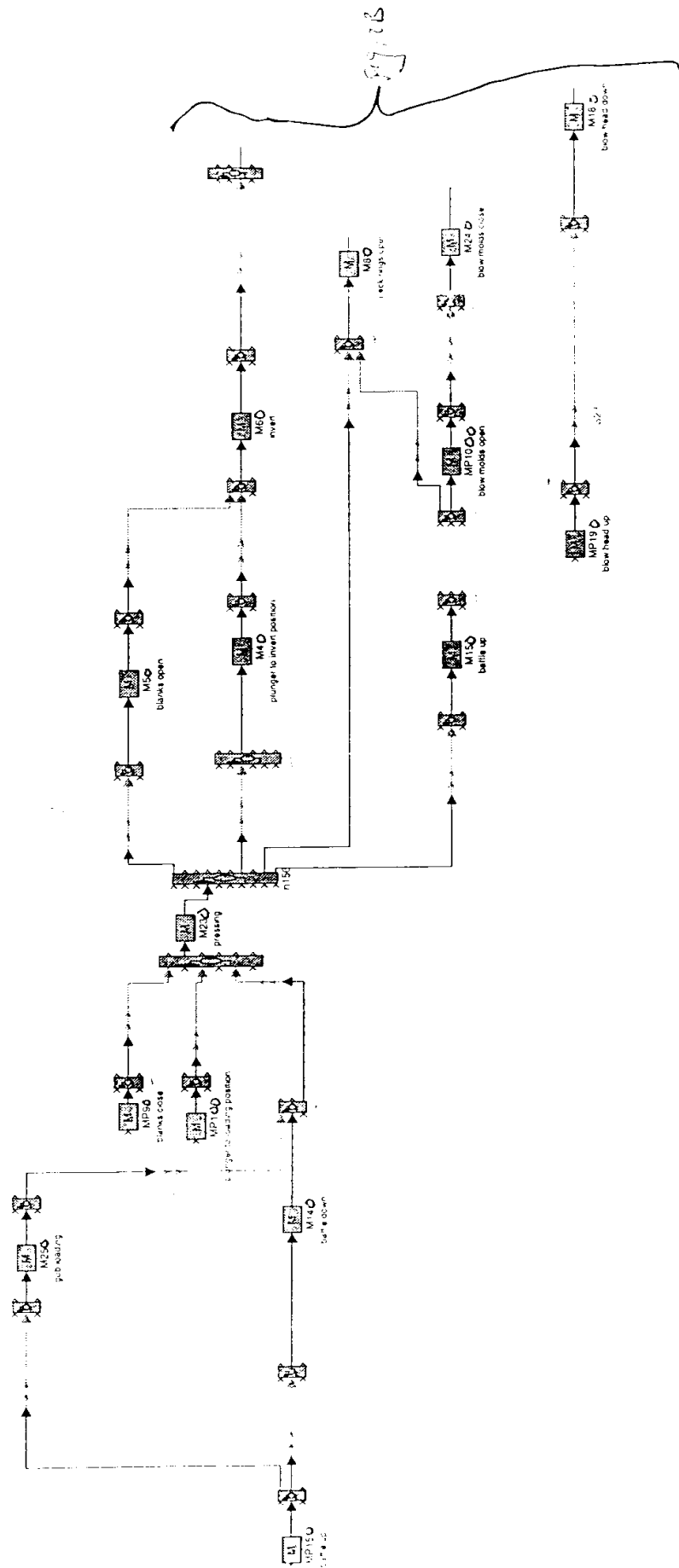


FIG-12A

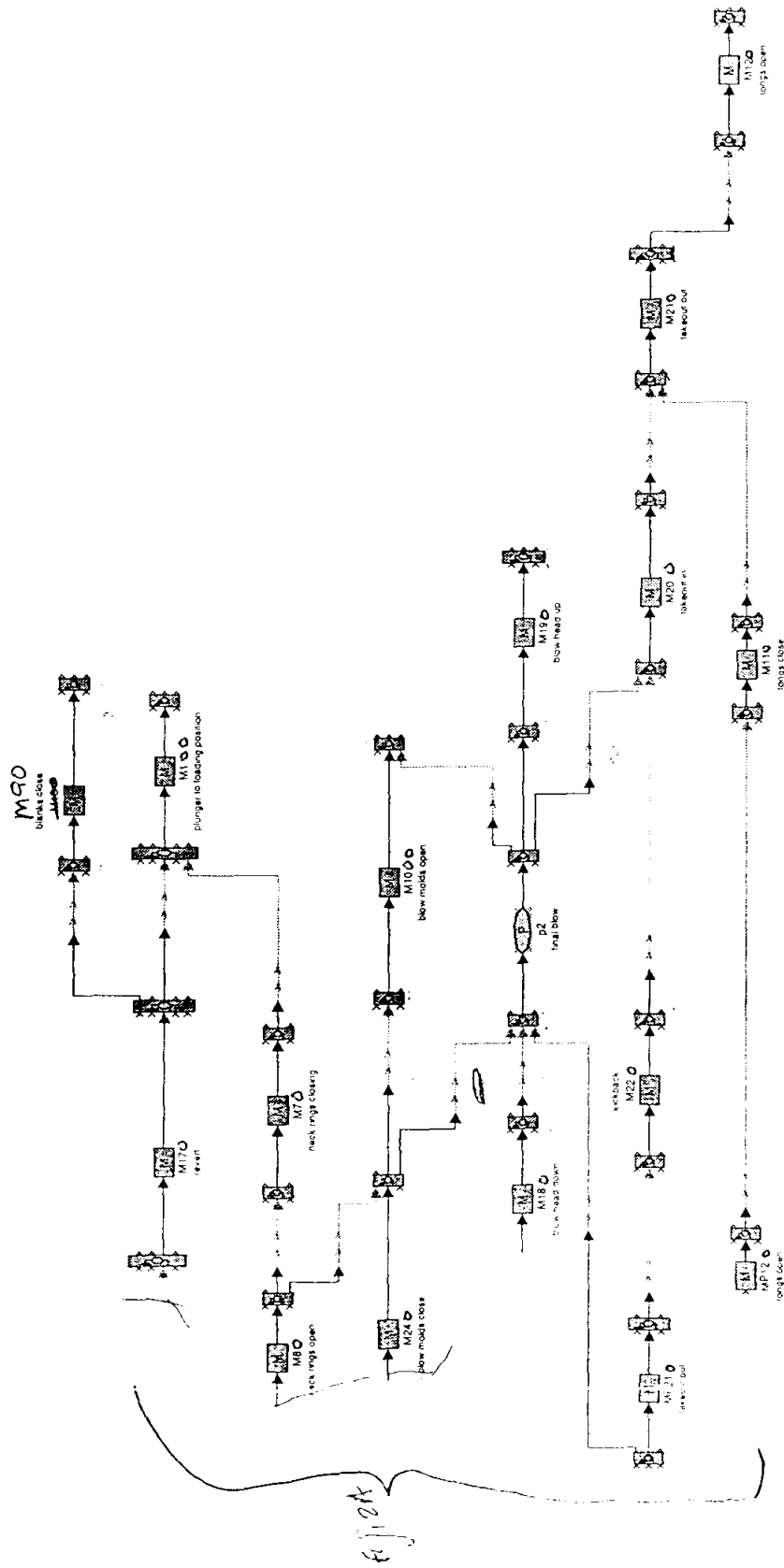


Fig 12B

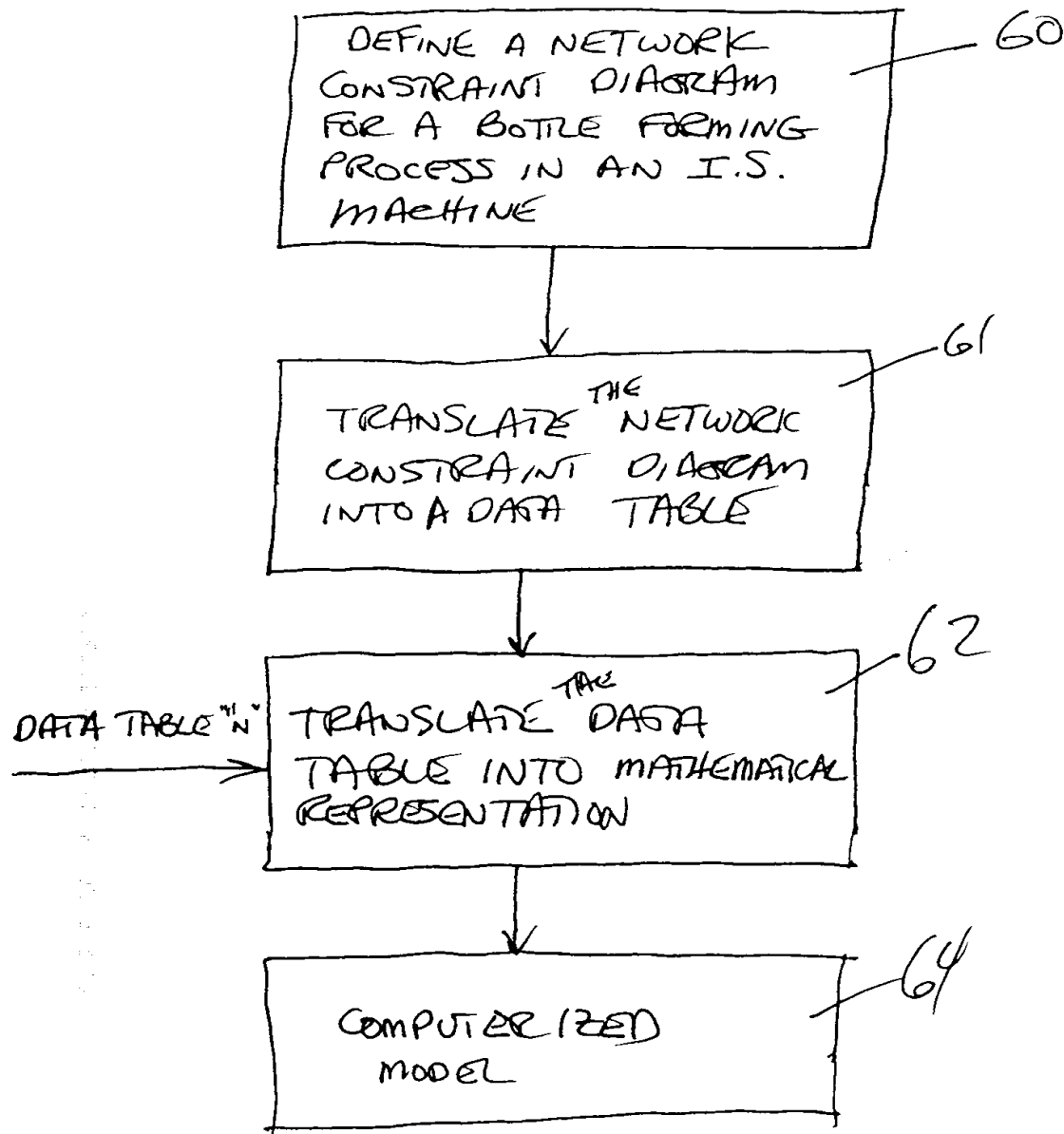


Fig-13

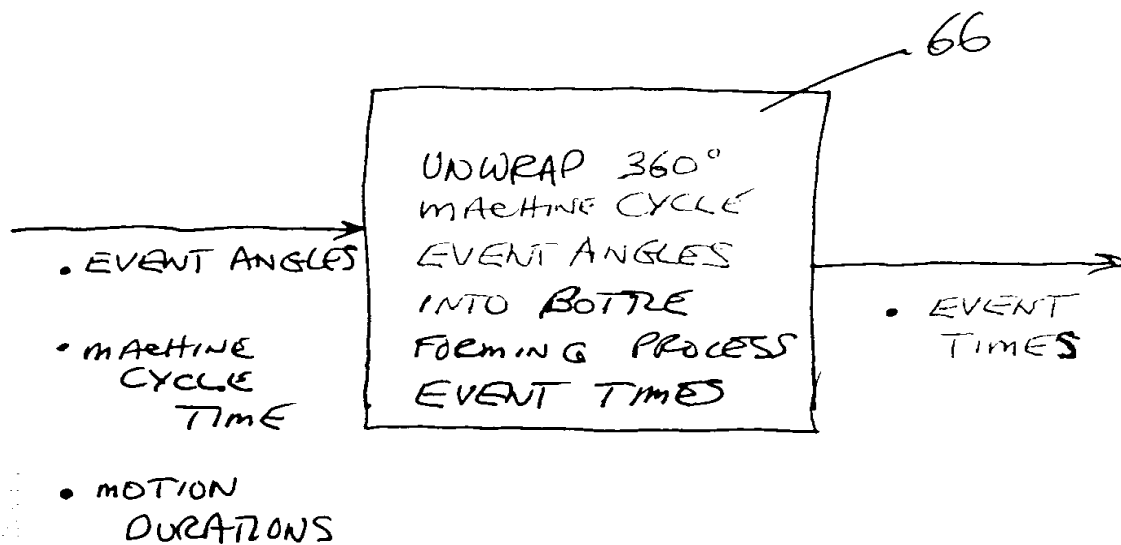
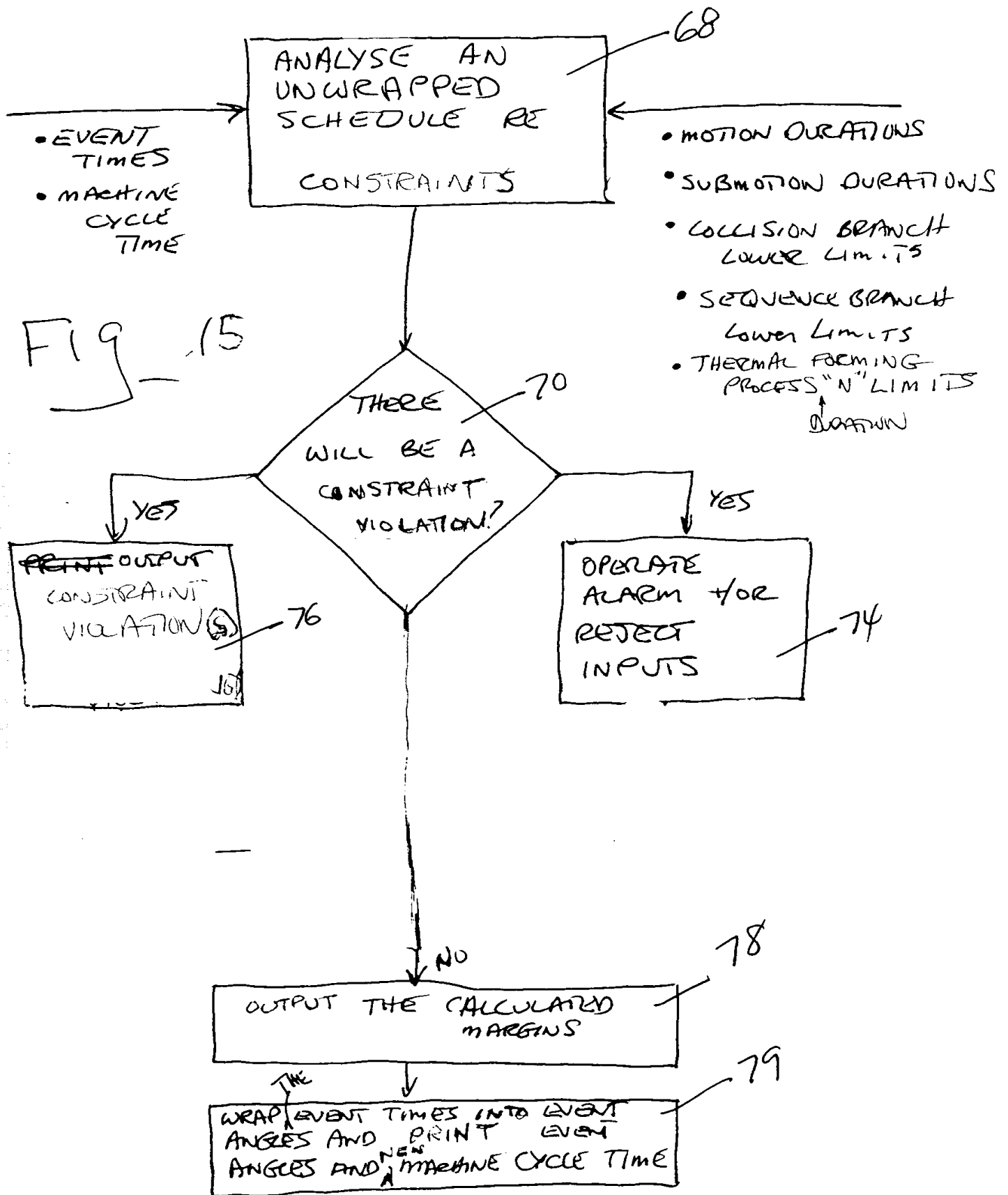
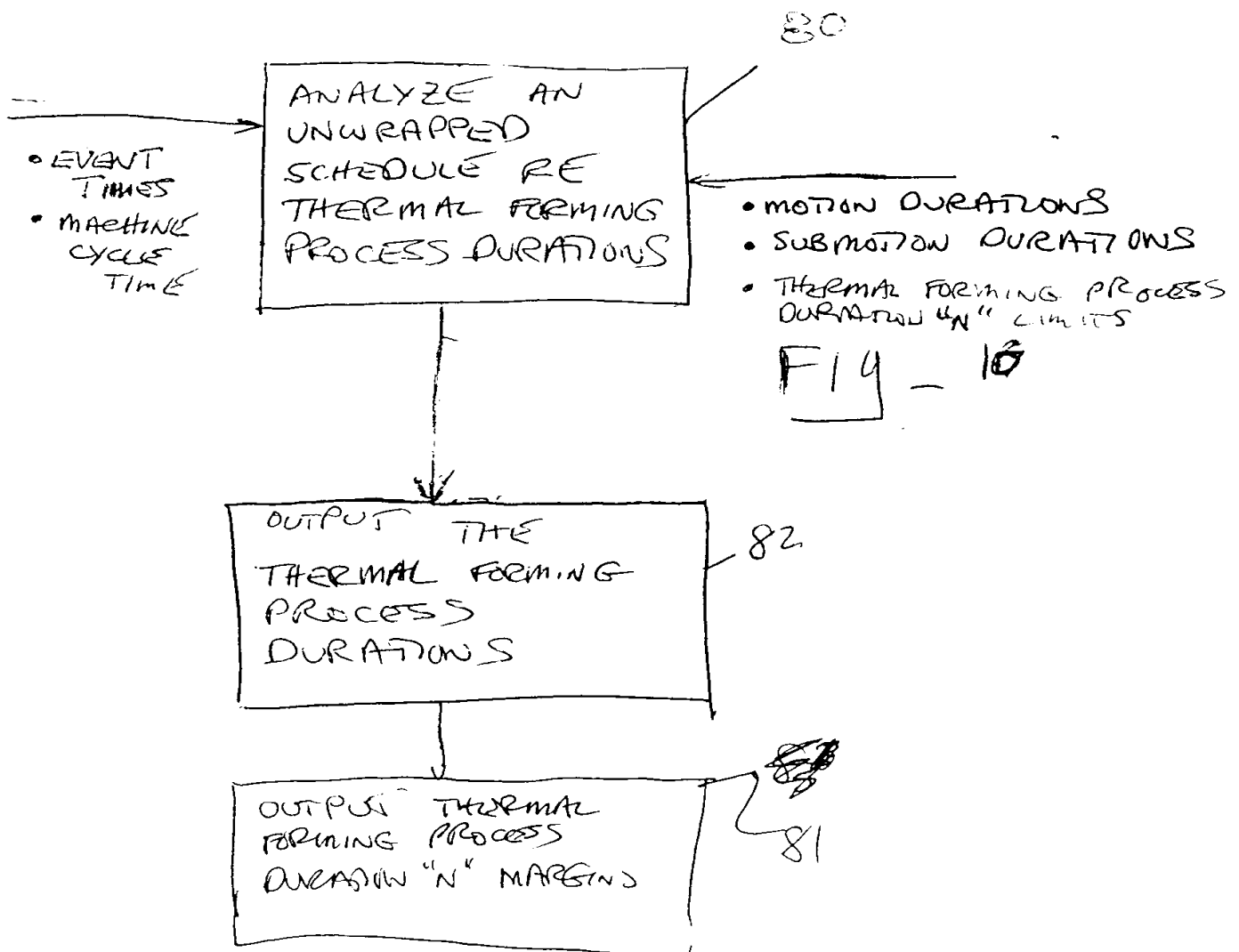


FIG - 14



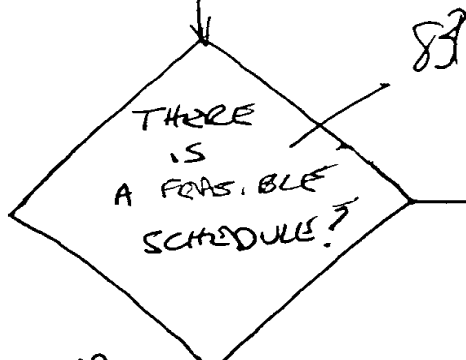




- MOTION DURATIONS
- SUBMOTION DURATIONS
- COLLISION BRANCH LOWER LIMITS
- SEQUENCE BRANCH LOWER LIMITS

OPTIMIZE UNWRAPPED SCHEDULE FOR MINIMUM CYCLE TIME

- EVENT TIMES
- MACHINE CYCLE TIME OR
- THERMAL FORMING PROCESS DURATIONS
- MACHINE CYCLE TIME
- OPTIMIZED <sup>MACHINE</sup> CYCLE TIME
- LOCK STATUS
- TARGET



NO

REJECT THE INPUTS

~~8885~~

OPTIMIZED

YES

WRAP EVENT TIMES INTO EVENT ANGLES

84

FIG-17

PRINT THE EVENT ANGLES AND THE NEW MACHINE CYCLE TIME

86

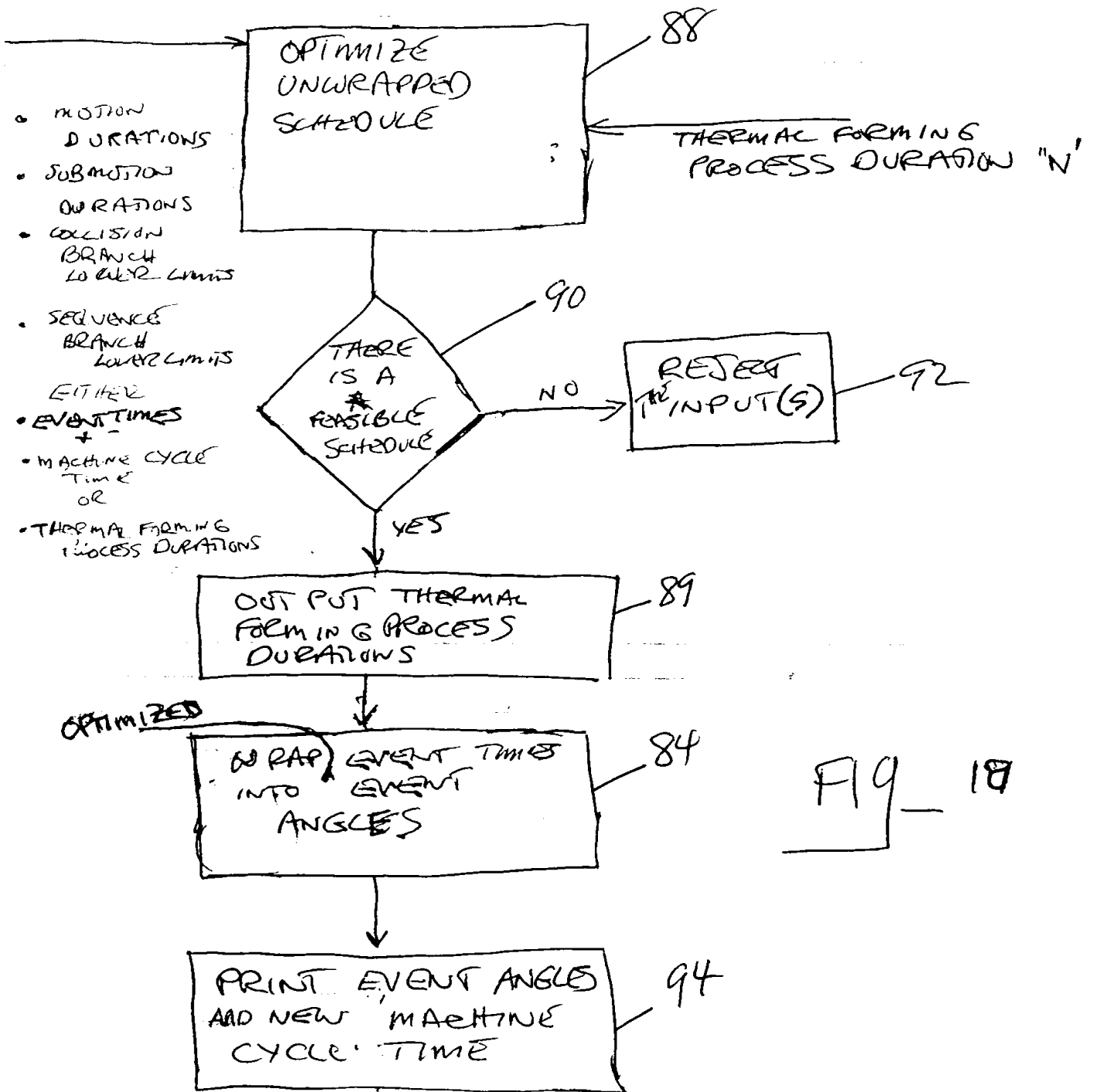


FIG-18

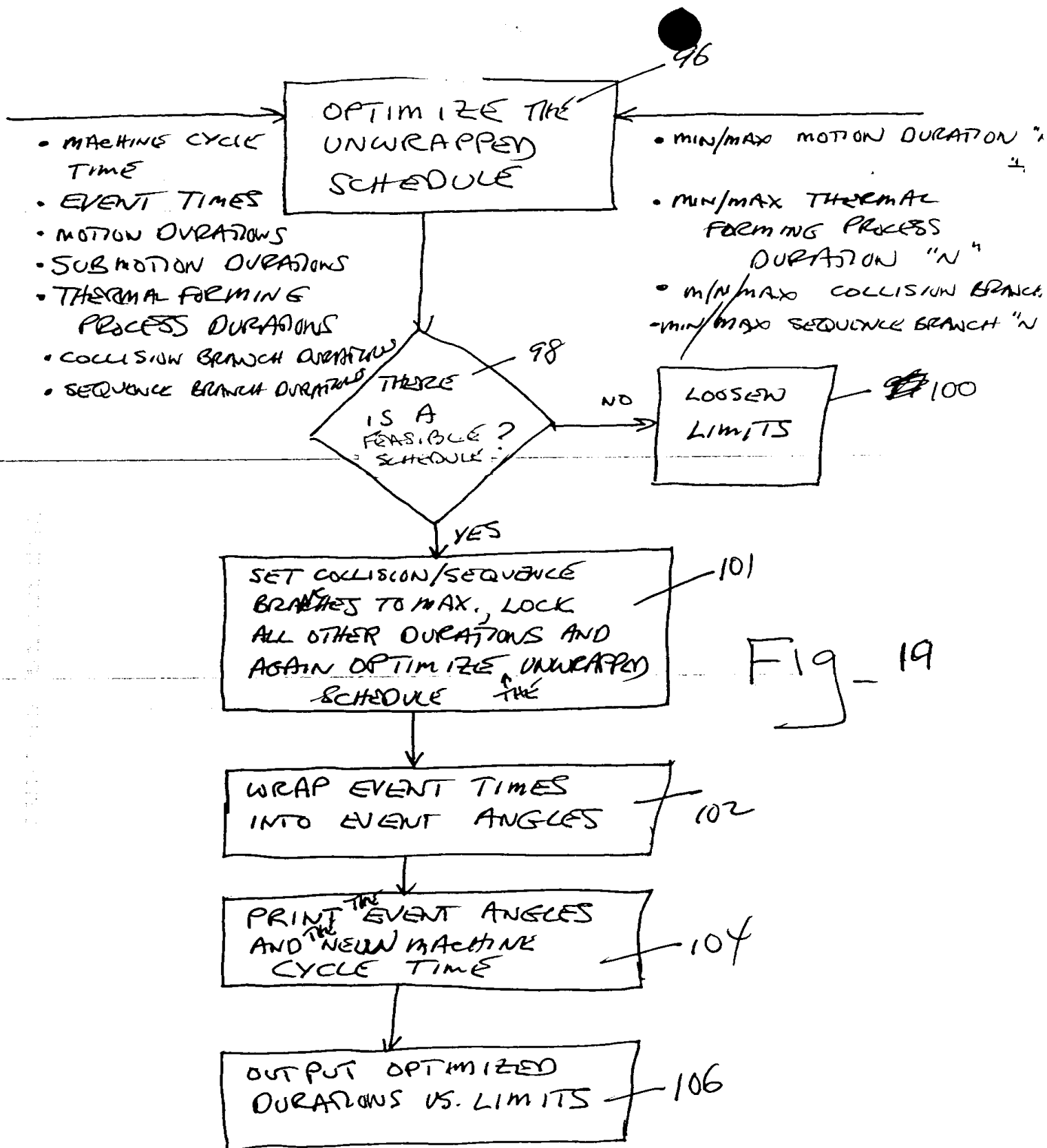


Fig-19

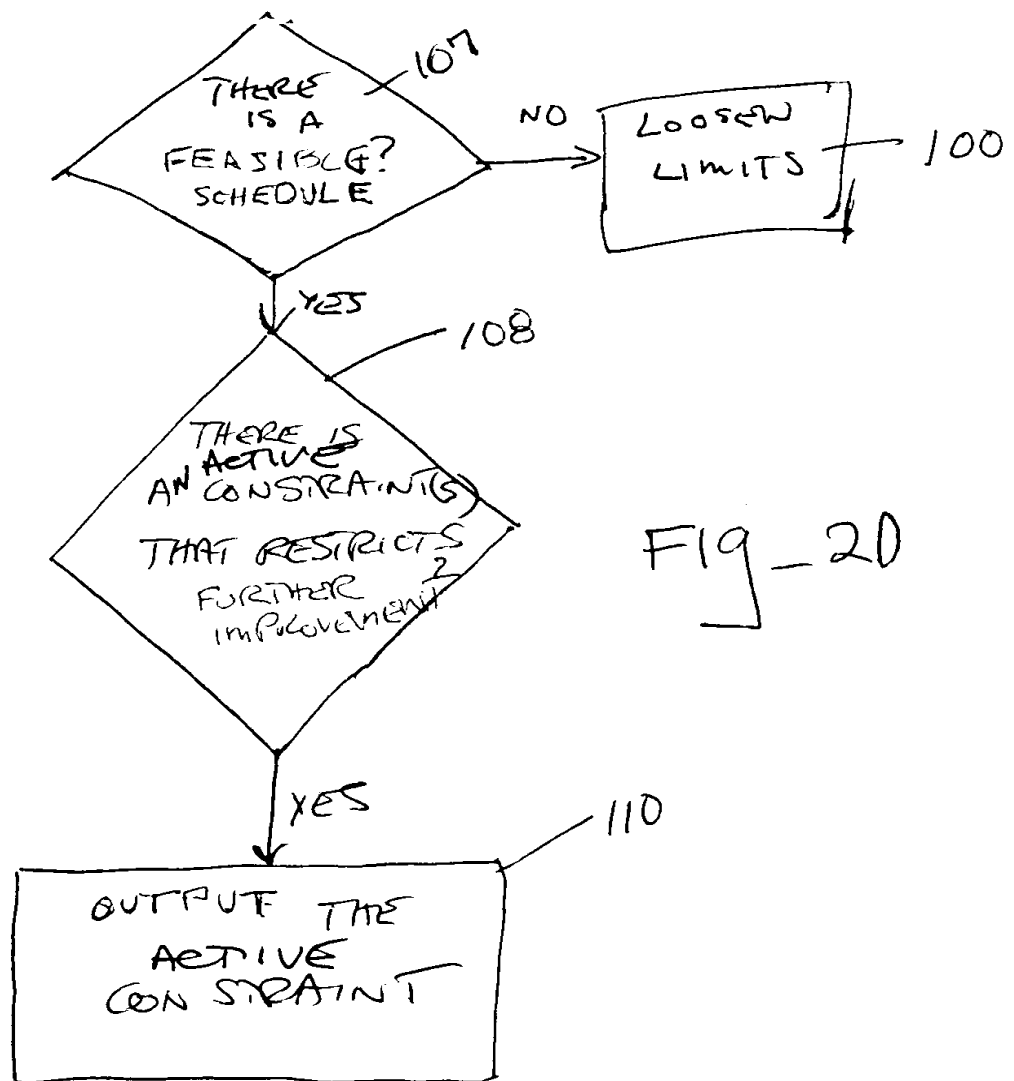


Fig-20

